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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Latarnik et al. Conf. No.: 6044  
Serial No.: 10/018,269 Group Art Unit: 3683  
Filed: April 25, 2002 Examiner: Sy, Mariano  
For: METHOD FOR PRESSURE MODULATION OF BRAKE PRESSURES  
Attorney Docket No.: AP9627

Commissioner for Patents  
MAIL STOP Appeal Brief - Patent  
P.O. Box 1450  
Alexandria, VA 22313-1450

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Joyce Krumpe  
Signature

Joyce Krumpe

Date: 1/19/2005

**BRIEF ON APPEAL**

Honorable Sir:

This Appeal is taken from the Examiner's Final Rejection dated December 31, 2003  
(Paper No. 11) of Claims 13-23 in the above-identified application. The Notice of Appeal was  
timely filed on June 29, 2004. Submitted herewith are two additional copies of this Appeal  
Brief.

**(1) Real Party In Interest**

The Real Party In Interest is Continental Teves AG & Co. of Frankfurt, Federal Republic of Germany.

**(2) Related Appeals and Interferences**

None

**(3) Status Of Claims**

Claims 13-23 are pending in the application and are involved in this Appeal. Claim 13 is an independent claim and Claims 14-23 ultimately depend from Claim 13. The present application was filed on October 30, 2001 with a Preliminary Amendment that canceled originally-filed Claims 1-12 and added Claims 13-23. In response to a first Office action dated June 27, 2003 (Paper No. 9), Appellant amended Claims 13-19 and 22-23. In response to a final Office action dated December 31, 2003 (Paper No. 11), Appellant filed a Notice of Appeal. An Advisory Action dated June 30, 2004 acknowledged a request for reconsideration has been considered but does not place the application in condition for allowance.

The Office Action Summary of the final Office action indicates that Claims 13-23 are rejected.

**(4) Status Of Amendments**

All amendments have been entered for purposes of this Appeal.

**(5) Summary Of The Invention**

By way of background, besides a primary pressure fluid source for hydraulic fluid, modern vehicle brake systems include one or a plurality of pressure fluid pumps which permit delivering hydraulic fluid that is pressurized for defined purposes. For example, these pumps are

pressure fluid pumps which are arranged on the valve block and can be operated by way of electric actuation of an electric motor and an eccentric. The purpose of these pressure fluid pumps is the active pressure build-up for defined controlling or regulating purposes when the brake pressure that originates from the main pressure source is not sufficient to reach the control objective.

In a method for pressure modulation of brake pressures for a dual-circuit brake system with a front-axle/rear-axle split-up on one-axle drive vehicles or with any desired brake force split-up in all-wheel drive vehicles, that is in all dual-circuit brake pressure transmission devices where an active pressure modulation in both wheels with a different brake pressure demand in both wheel brake circuits is provided, this brake pressure modulation has so far been performed by separately actuating inlet and outlet valves of the respective wheel brake circuit for controlling the traction slip. The pressure fluid source is separated from the pressure-side delivery circuit of the pressure fluid pump to prevent the hydraulic fluid from returning into the pressure fluid source. The above separation is effected by means of a separating valve.

The delivery rate and, thus, indirectly the brake pressure is adjusted this way in each of the two wheel brake circuits of a brake pressure transmission device. However, this suffers from the disadvantage that the valves operate against the pressure of the pressure fluid pump. This produces noises which are audible to the driver and may leave the impression that there is something wrong with the vehicle.

In addition, the prior art pressure modulation by way of the separate actuation of inlet and outlet valves provides a discharge of the brake pressure from both wheel brake circuits via the outlet valves. The pressure fluid flows through the pressure fluid pump and the pressure limiting valve associated with the separating valve and predefining the pressure level of the brake pressure transmission circuit back into the pressure fluid source. Especially in driving stability control operations and with rear-axle driven vehicles with a high pressure level of the brake pressure transmission circuit, the pressure fluid pump is loaded to a considerable degree because it operates against a high pressure. In addition, noise which is also audible to the driver is

produced during overflow of the pressure-limiting valve and during supply by the pressure fluid pump.

An object of the present invention is to provide a method for the pressure modulation of brake pressures which reduces noise emissions and enhances the possibility of braking intervention during braking by independent force.

The method of pressure modulation of brake pressure with an electric pressure fluid pump in a dual-circuit brake pressure transmission device, with the steps of introduction of a brake pressure into the one and/or other wheel brake circuit of the one brake pressure transmission circuit, and discharge of the brake pressure into the one and/or the other wheel brake circuit of the one brake pressure transmission circuit, wherein a split-up of the wheel brake circuit with different brake pressure demands is provided, and wherein the leading wheel brake circuit is defined as wheel brake circuit with a higher brake pressure demand, and wherein further the steps introduction, maintaining, and reduction of the brake pressures of the following wheel brake circuit are controlled or regulated by way of the leading wheel brake circuit, the noise emissions in braking by independent force are reduced because the inlet valve of the leading wheel brake circuit remains open also after the brake pressure demand has been reached so that this valve is not required to operate in opposition to the pressure of the pressure fluid pump. Admittedly, the closed inlet valve of the following wheel brake circuit operates in opposition to the pressure of the pressure fluid pump, however, this pressure in the following wheel brake circuit is limited to the differential pressure between the leading and the following wheel brake circuit so that the noise emissions during opening of this inlet valve are also reduced. The open inlet valve permits a pedal force braking operation also during pressure modulation.

According to the present invention, one inlet valve and one outlet valve is provided in each wheel brake circuit, and the brake pressure demand of the leading and following wheel brake circuits is controlled by way of the inlet valve of the following wheel brake circuit and the pressure fluid supplied by the pressure fluid pump according to the brake pressure demand, with

the inlet valve of the leading wheel brake circuit being closed. Due to the division into a leading wheel brake circuit with a higher pressure demand and a following wheel brake circuit with a lower pressure demand, the brake pressure demand of the following wheel brake circuit can always be built up from the leading wheel brake circuit. In this arrangement, the pressure fluid pump for the brake pressure adjustment furnishes only the delivery rate necessary to satisfy the brake pressure demand of the leading wheel brake circuit, there being no need to actuate the inlet valve of the leading wheel brake circuit which is open in its deenergized state.

When the pressure of the following wheel brake circuit must be corrected because, e.g. the coefficient of friction of the ground changes during traction slip control, the brake pressure demand of the following wheel brake circuit is changed from the leading wheel brake circuit by opening the inlet valve of the following wheel brake circuit, with the pressure fluid pump being active or passive. When only minor pressure variations must be effected in the following wheel brake circuit, the pressure in the following wheel brake circuit can be changed exclusively out of the leading wheel brake circuit, in the event of a sufficient difference in pressure between the leading and following wheel brake circuits, without the requirement to correct the pressure in the leading wheel brake circuit towards the brake pressure demand. Advantageously, the brake pressure of the wheel brake circuits is maintained, with the switch valve, separating valve and outlet valve closed, the inlet valve of the leading wheel brake circuit open, and the outlet and inlet valve of the following wheel brake circuit closed. Pedal force braking is possible in this mode of braking by independent force due to the inlet valve of the leading brake circuit being open.

The controlling or regulating signals for the actuation of the valves according to the method of the present invention, which signals are based on calculated characteristics for the steps introduction, maintaining, and reduction, are predetermined by a pressure controller in which a pressure model is stored and which is connected to the controlling or regulating units for an anti-lock function and/or traction slip control and/or driving stability function.

**(6) Issue**

Are Claims 13-23 unpatentable under 35 U.S.C. § 102(b) over Burgdorf et al. (WO 96/02409, U.S. Patent No. 5,918,948 is presented as an English equivalent, hereinafter “Burgdorf”)?

**(7) Grouping Of Claims**

Independent Claim 13 is separately patentable. Dependent Claims 14-23 stand or fall with independent Claim 13.

**(8) Argument**

Claims 13-23 were rejected under 35 U.S.C. § 102(b) as being anticipated by Burgdorf. Appellant respectfully traverses this rejection, and submits that these claims are not anticipated in view of the cited prior art.

The Examiner asserts that Burgdorf discloses a method of modulating brake pressure of a vehicle brake circuit comprising the steps of: categorizing a vehicle brake circuit into a leading wheel brake circuit portion of wheel brake cylinder 17 and a following brake wheel brake circuit portion of wheel brake cylinder 18; determining brake pressure demands for the leading and following wheel brake circuit portions; introducing, maintaining, and reducing the brake pressure of the following wheel brake circuit portion in dependence on the leading wheel brake circuit portion, such that a pressure fluid is introduced into the following brake circuit portion in a magnitude established by way of the leading wheel brake circuit portion.

Although Burgdorf does generally disclose the same hydraulic brake system hardware as that set forth in the instant application, a close review of Burgdorf shows that nothing in Burgdorf teaches the interplay between the leading wheel brake circuit and the following wheel brake circuit. Specifically, Burgdorf does not teach the step of introducing, maintaining, and reducing the brake pressure of the following wheel brake circuit portion in dependence on the leading wheel brake circuit portion, such that a pressure fluid is introduced into the following

brake circuit portion in a magnitude established by way of the leading wheel brake circuit portion.

Instead, Burgdorf teaches a parallel connection of an inlet valve 11 with a fourth non-return valve 29 and an outlet valve 12 is used for the modulation of the pressure introduced into the first wheel brake cylinder 17. *See col. 4, lines 20-25.* A second parallel connection of a second inlet valve 15 with a sixth non-return valve 40 and a second outlet valve 16 is provided to control the hydraulic pressure introduced into the second wheel brake cylinder 18. *See col. 4, lines 32-35.* During normal braking operations, pressure increase and pressure reduction in the wheel brake cylinders 17, 18 can be effected by a corresponding operation of the first braking pressure generator 1 by way of the open separating valve 10 and the open inlet valves 11, 15.

*See col. 4, lines 48-52.*

Specifically, as described in column 4, line 57 – column 5, line 5, of Burgdorf, “the pressure is modulated by correspondingly switching the inlet and outlet valves 11 and 12, and the pressure fluid discharged into the low-pressure accumulator 13 is returned by the return pump 7 until the pressure level of the master brake cylinder is reached. Upon commencement of each independently actuated braking operation, the brake power booster 5 is actuated irrespective of the driver’s wish, during the starting period of the return pump 7, so that the wheel brakes 17, 18 are prefilled. The separating valve 10 is closed and the switching valve 9 is opened for further pressure increase. The result is that the return pump 7 generates a high pressure at the junction 21 which is limited by the pressure-limiting valve 28 to permit individual adjustment of the desired *independent* braking pressure in the wheel brake cylinders 17, 18 by switching the ABS inlet and outlet valves 11, 13 and 12, 16. Thus, Burgdorf et al discloses an *independently* actuated braking operation whereby individual adjustment of each wheel’s braking pressure is adjusted by switching the ABS inlet and outlet valves 11, 15 and 12, 16, respectively. There is no teaching that the manipulation of the inlet and outlet valves is done in dependence on any other portion of the wheel brake circuit. Moreover, there is no teaching in Burgdorf for manipulating the inlet and outlet valves such that “a pressure fluid is introduced into the

following brake circuit portion in a magnitude established by. . . the leading wheel brake circuit portion.”

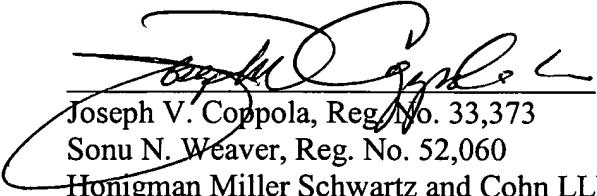
In contrast to Burgdorf, the claimed method of the present invention includes categorizing a vehicle brake circuit into a leading wheel brake circuit portion and a following wheel brake circuit portion and introducing, maintaining and reducing the brake pressure in the following wheel brake circuit portion in dependence on the leading wheel brake circuit portion. Nowhere does Burgdorf teach introducing, maintaining, and reducing the brake pressure of the following wheel brake circuit portion in dependence on the leading wheel brake circuit portion, such that a pressure fluid is introduced into the following brake circuit portion in a magnitude established by way of the leading wheel brake circuit portion. According to MPEP §2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Therefore, the Examiner fails to establish that Burgdorf anticipates Appellant’s claimed invention as in Claim 13.

Claims 14-23 ultimately depend from independent Claim 13. For at least the reasons set forth above, Claims 14-23 are patentable over the applied art.

**(9) Conclusion**

For the above reasons, Appellant respectfully submits that Claims 13-23 are patentable over the applied art. Therefore, the Board is respectfully requested to reverse the Examiner's decision.

Respectfully submitted,

  
Joseph V. Coppola, Reg. No. 33,373  
Sonu N. Weaver, Reg. No. 52,060  
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Attorneys for Appellant  
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**Appendix Of Claims On Appeal – Claims 13-23**

13. Method of modulating brake pressure of a vehicle brake circuit, comprising the steps of:

    categorizing a vehicle brake circuit into a leading wheel brake circuit portion and a following wheel brake circuit portion;

    determining brake pressure demands for the leading and following wheel brake circuit portions;

    introducing, maintaining, and reducing the brake pressure of the following wheel brake circuit portion in dependence on the leading wheel brake circuit portion, such that a pressure fluid is introduced into the following brake circuit portion in a magnitude established by way of the leading wheel brake circuit portion.

14. Method as claimed in claim 13, wherein the leading wheel brake circuit portion is connected to a pressure fluid source by way of opening of a switch valve, and the pressure fluid is introduced into the leading and following wheel brake circuit portions by way of a pressure fluid pump arranged in the vehicle brake circuit, with the following wheel brake circuit portion being separated from the pressure fluid source by a separating valve.

15. Method as claimed in claim 13, wherein the leading wheel brake circuit portion is connected to a pressure fluid accumulator and the pressure fluid is introduced into the leading and following wheel brake circuit portions by way of a pressure fluid pump arranged in the vehicle brake circuit, wherein the leading and following wheel brake circuit portions are separated from a pressure fluid source by a separating valve.

16. Method as claimed in claim 13, further including a step of controlling the brake pressure demands of the leading and following wheel brake circuit portions by way of an inlet valve of the following wheel brake circuit portion according to the brake pressure demand, wherein an inlet valve of the leading wheel brake circuit portion remains open, and outlet valves of the leading and following wheel brake circuit portions remain closed.

17. Method as claimed in claim 13, wherein the brake pressure demand of the following wheel brake circuit portion is changed by delivery out of the leading wheel brake circuit portion, wherein an inlet valve of the following wheel brake circuit portion remains open.

18. Method as claimed in claim 16, wherein brake pressure is introduced and is increased compared to the brake pressure demand of the leading wheel brake circuit portion, the inlet valve of the leading wheel brake circuit portion is closed in dependence on the brake pressure in the vehicle brake circuit or in dependence on a time constant correlated to a condition variable.

19. Method as claimed in claim 13, wherein the brake pressure in the leading wheel brake circuit portion is discharged into a pressure fluid source by way of the vehicle brake circuit by opening a separating valve.

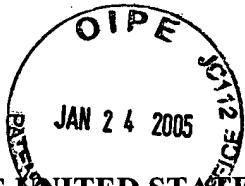
20. Method as claimed in claim 13, wherein the brake pressure in the following brake circuit portion is discharged through a return line into a pressure fluid accumulator by opening an outlet valve when an inlet valve is closed.

21. Method as claimed in claim 13, wherein the characteristics for the steps introduction, maintaining, and reduction of the brake pressure are predetermined by a pressure controller.

22. Method as claimed in claim 13, wherein a pressure fluid pump is controlled by way of a pulse-width modulated control signal, predetermined by a pressure controller during the introduction of the brake pressure into the leading and following wheel brake circuit portions.

23. Method as claimed in claim 13, wherein a pressure fluid pump is operated during the steps maintaining and reducing of the brake pressures by way of adjusting an energy supply, or a rotational speed, or a conveying capacity in a predetermined basic (load) condition.

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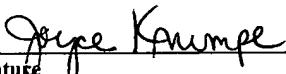
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Signature

Joyce Krumpe

Date: 1/19/2005

**RE-FILING OF APPEAL BRIEF AND EXPLANATION  
OF FACTS SURROUNDING RE-FILING OF APPEAL BRIEF**

Honorable Sir:

1) In view of the facts set forth below, the undersigned requests that the Appeal Brief submitted August 30, 2004 be supplanted by the Appeal Brief submitted in triplicate herewith.

2) This Appeal is taken from the Examiner's Final Rejection dated December 31, 2003 (Paper No. 11) of Claims 13-23 in the above-identified application. The Notice of Appeal was timely filed on June 29, 2004.

3) The Appeal Brief was filed on August 30, 2004. As filed, the Appeal Brief, Appeal Brief Transmittal and the associated Postcard contained the proper identification the Applicant's name, the Filing Date, the Confirmation Number, the Group Art Number, of the Examiner and Title. However, the Serial Number shown on the above referenced papers was incorrect. In evidence of the timely filing of the Appeal Brief, attached herewith (Appendix A) is the Appeal Brief filed August 30, 2004, Appeal Brief Transmittal dated August 30, 2004, Certificate of Mailing dated August 30, 2004 and the Postcard for same evidencing a date stamp of "September 2, 2004" placed thereon by the United States Patent and Trademark Office of Initial Patent Examination.

4) The undersigned was not aware of the incorrect Serial Number on the Appeal Brief until January 4, 2005 when the error was brought to the undersigned's attention by Examiner Robert Siconolfi in an Office Action mailed on December 1, 2004. Appendix B includes a copy of Mr. Siconolfi's Office Action. Specifically, see paragraph 2 on page 2, which discusses the Appeal Brief filed on August 30, 2004.

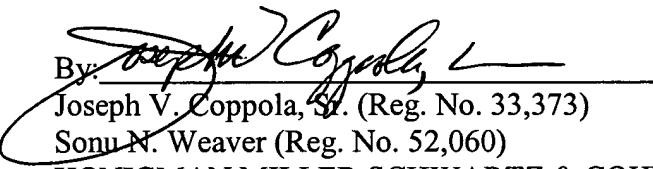
5) Sonu Weaver had a telephone conversation with Examiner Sy on January 5, 2004 regarding the Appeal Brief filed on August 30, 2004. Examiner Sy requested re-filing the Appeal Brief with the correct Serial Number, setting forth evidence of filing the Appeal Brief on August 30, 2004 and explaining the facts surrounding the August 30, 2004 Appeal Brief.

6) The Appeal Brief containing the proper Serial Number, along with two additional copies, is respectfully submitted herewith for entering into the record of this application.

7) Attached is a copy of the undersigned's Monthly Statement of Deposit Account dated September 30, 2004 showing that a fee of \$330.00 was charged on 09/02/04 to U.S. Serial No. 10/181,136 for filing an Appeal Brief (Appendix C). The \$330.00 fee charged to the deposit account of the undersigned on September 2, 2004 is the fee owed for the filing of the attached Appeal Brief. Accordingly, no further fee is due with the filing of the attached Appeal Brief.

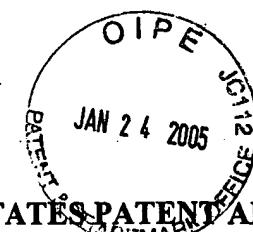
Respectfully submitted,

Date: January 19, 2005

By:   
Joseph V. Coppola, Sr. (Reg. No. 33,373)  
Sonu N. Weaver (Reg. No. 52,060)  
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pressure fluid pumps which are arranged on the valve block and can be operated by way of electric actuation of an electric motor and an eccentric. The purpose of these pressure fluid pumps is the active pressure build-up for defined controlling or regulating purposes when the brake pressure that originates from the main pressure source is not sufficient to reach the control objective.

In a method for pressure modulation of brake pressures for a dual-circuit brake system with a front-axle/rear-axle split-up on one-axle drive vehicles or with any desired brake force split-up in all-wheel drive vehicles, that is in all dual-circuit brake pressure transmission devices where an active pressure modulation in both wheels with a different brake pressure demand in both wheel brake circuits is provided, this brake pressure modulation has so far been preformed by separately actuating inlet and outlet valves of the respective wheel brake circuit for controlling the traction slip. The pressure fluid source is separated from the pressure-side delivery circuit of the pressure fluid pump to prevent the hydraulic fluid from returning into the pressure fluid source. The above separation is effected by means of a separating valve.

The delivery rate and, thus, indirectly the brake pressure is adjusted this way in each of the two wheel brake circuits of a brake pressure transmission device. However, this suffers from the disadvantage that the valves operate against the pressure of the pressure fluid pump. This produces noises which are audible to the driver and may leave the impression that there is something wrong with the vehicle.

In addition, the prior art pressure modulation by way of the separate actuation of inlet and outlet valves provides a discharge of the brake pressure from both wheel brake circuits via the outlet valves. The pressure fluid flows through the pressure fluid pump and the pressure limiting valve associated with the separating valve and predefining the pressure level of the brake pressure transmission circuit back into the pressure fluid source. Especially in driving stability control operations and with rear-axle driven vehicles with a high pressure level of the brake pressure transmission circuit, the pressure fluid pump is loaded to a considerable degree because it operates against a high pressure. In addition, noise which is also audible to the driver is

produced during overflow of the pressure-limiting valve and during supply by the pressure fluid pump.

An object of the present invention is to provide a method for the pressure modulation of brake pressures which reduces noise emissions and enhances the possibility of braking intervention during braking by independent force.

The method of pressure modulation of brake pressure with an electric pressure fluid pump in a dual-circuit brake pressure transmission device, with the steps of introduction of a brake pressure into the one and/or other wheel brake circuit of the one brake pressure transmission circuit, and discharge of the brake pressure into the one and/or the other wheel brake circuit of the one brake pressure transmission circuit, wherein a split-up of the wheel brake circuit with different brake pressure demands is provided, and wherein the leading wheel brake circuit is defined as wheel brake circuit with a higher brake pressure demand, and wherein further the steps introduction, maintaining, and reduction of the brake pressures of the following wheel brake circuit are controlled or regulated by way of the leading wheel brake circuit, the noise emissions in braking by independent force are reduced because the inlet valve of the leading wheel brake circuit remains open also after the brake pressure demand has been reached so that this valve is not required to operate in opposition to the pressure of the pressure fluid pump. Admittedly, the closed inlet valve of the following wheel brake circuit operates in opposition to the pressure of the pressure fluid pump, however, this pressure in the following wheel brake circuit is limited to the differential pressure between the leading and the following wheel brake circuit so that the noise emissions during opening of this inlet valve are also reduced. The open inlet valve permits a pedal force braking operation also during pressure modulation.

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Instead, Burgdorf teaches a parallel connection of an inlet valve 11 with a fourth non-return valve 29 and an outlet valve 12 is used for the modulation of the pressure introduced into the first wheel brake cylinder 17. *See col. 4, lines 20-25.* A second parallel connection of a second inlet valve 15 with a sixth non-return valve 40 and a second outlet valve 16 is provided to control the hydraulic pressure introduced into the second wheel brake cylinder 18. *See col. 4, lines 32-35.* During normal braking operations, pressure increase and pressure reduction in the wheel brake cylinders 17, 18 can be effected by a corresponding operation of the first braking pressure generator 1 by way of the open separating valve 10 and the open inlet valves 11, 15.

*See col. 4, lines 48-52.*

Specifically, as described in column 4, line 57 – column 5, line 5, of Burgdorf, “the pressure is modulated by correspondingly switching the inlet and outlet valves 11 and 12, and the pressure fluid discharged into the low-pressure accumulator 13 is returned by the return pump 7 until the pressure level of the master brake cylinder is reached. Upon commencement of each independently actuated braking operation, the brake power booster 5 is actuated irrespective of the driver’s wish, during the starting period of the return pump 7, so that the wheel brakes 17, 18 are prefilled. The separating valve 10 is closed and the switching valve 9 is opened for further pressure increase. The result is that the return pump 7 generates a high pressure at the junction 21 which is limited by the pressure-limiting valve 28 to permit individual adjustment of the desired *independent* braking pressure in the wheel brake cylinders 17, 18 by switching the ABS inlet and outlet valves 11, 13 and 12, 16. Thus, Burgdorf et al discloses an *independently* actuated braking operation whereby individual adjustment of each wheel’s braking pressure is adjusted by switching the ABS inlet and outlet valves 11, 15 and 12, 16, respectively. There is no teaching that the manipulation of the inlet and outlet valves is done in dependence on any other portion of the wheel brake circuit. Moreover, there is no teaching in Burgdorf for manipulating the inlet and outlet valves such that “a pressure fluid is introduced into the

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following brake circuit portion in a magnitude established by. . . the leading wheel brake circuit portion."

In contrast to Burgdorf, the claimed method of the present invention includes categorizing a vehicle brake circuit into a leading wheel brake circuit portion and a following wheel brake circuit portion and introducing, maintaining and reducing the brake pressure in the following wheel brake circuit portion in dependence on the leading wheel brake circuit portion. Nowhere does Burgdorf teach introducing, maintaining, and reducing the brake pressure of the following wheel brake circuit portion in dependence on the leading wheel brake circuit portion, such that a pressure fluid is introduced into the following brake circuit portion in a magnitude established by way of the leading wheel brake circuit portion. According to MPEP §2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Therefore, the Examiner fails to establish that Burgdorf anticipates Appellant's claimed invention as in Claim 13.

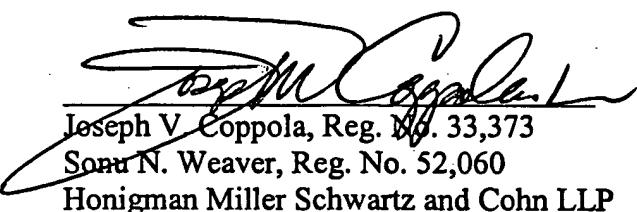
Claims 14-23 ultimately depend from independent Claim 13. For at least the reasons set forth above, Claims 14-23 are patentable over the applied art.

**(9) Conclusion**

For the above reasons, Appellant respectfully submits that Claims 13-23 are patentable over the applied art. Therefore, the Board is respectfully requested to reverse the Examiner's decision.

Respectfully submitted,

*August 30, 2004*

  
Joseph V. Coppola, Reg. No. 33,373  
Sara N. Weaver, Reg. No. 52,060  
Honigman Miller Schwartz and Cohn LLP  
32270 Telegraph Road, Suite 225  
Bingham Farms, MI 48025  
Attorneys for Appellant  
Telephone: (248)566-8500

Appendix Of Claims On Appeal – Claims 13-23

13. Method of modulating brake pressure of a vehicle brake circuit, comprising the steps of:

    categorizing a vehicle brake circuit into a leading wheel brake circuit portion and a following wheel brake circuit portion;

    determining brake pressure demands for the leading and following wheel brake circuit portions;

    introducing, maintaining, and reducing the brake pressure of the following wheel brake circuit portion in dependence on the leading wheel brake circuit portion, such that a pressure fluid is introduced into the following brake circuit portion in a magnitude established by way of the leading wheel brake circuit portion.

14. Method as claimed in claim 13, wherein the leading wheel brake circuit portion is connected to a pressure fluid source by way of opening of a switch valve, and the pressure fluid is introduced into the leading and following wheel brake circuit portions by way of a pressure fluid pump arranged in the vehicle brake circuit, with the following wheel brake circuit portion being separated from the pressure fluid source by a separating valve.

15. Method as claimed in claim 13, wherein the leading wheel brake circuit portion is connected to a pressure fluid accumulator and the pressure fluid is introduced into the leading and following wheel brake circuit portions by way of a pressure fluid pump arranged in the vehicle brake circuit, wherein the leading and following wheel brake circuit portions are separated from a pressure fluid source by a separating valve.

16. Method as claimed in claim 13, further including a step of controlling the brake pressure demands of the leading and following wheel brake circuit portions by way of an inlet valve of the following wheel brake circuit portion according to the brake pressure demand, wherein an inlet valve of the leading wheel brake circuit portion remains open, and outlet valves of the leading and following wheel brake circuit portions remain closed.

17. Method as claimed in claim 13, wherein the brake pressure demand of the following wheel brake circuit portion is changed by delivery out of the leading wheel brake circuit portion, wherein an inlet valve of the following wheel brake circuit portion remains open.

18. Method as claimed in claim 16, wherein brake pressure is introduced and is increased compared to the brake pressure demand of the leading wheel brake circuit portion, the inlet valve of the leading wheel brake circuit portion is closed in dependence on the brake pressure in the vehicle brake circuit or in dependence on a time constant correlated to a condition variable.

19. Method as claimed in claim 13, wherein the brake pressure in the leading wheel brake circuit portion is discharged into a pressure fluid source by way of the vehicle brake circuit by opening a separating valve.

20. Method as claimed in claim 13, wherein the brake pressure in the following brake circuit portion is discharged through a return line into a pressure fluid accumulator by opening an outlet valve when an inlet valve is closed.

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21. Method as claimed in claim 13, wherein the characteristics for the steps introduction, maintaining, and reduction of the brake pressure are predetermined by a pressure controller.

22. Method as claimed in claim 13, wherein a pressure fluid pump is controlled by way of a pulse-width modulated control signal, predetermined by a pressure controller during the introduction of the brake pressure into the leading and following wheel brake circuit portions.

23. Method as claimed in claim 13, wherein a pressure fluid pump is operated during the steps maintaining and reducing of the brake pressures by way of adjusting an energy supply, or a rotational speed, or a conveying capacity in a predetermined basic (load) condition.

OAK\_A.597833.1

Practitioner's Docket No. \_\_\_\_\_

AP9627

**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Latarnik  
 Application No.: 10 / 181,136 Group No.: 3683  
 Filed: 4/25/02 Examiner: Sy, Mariano  
 For: Method for Pressure Modulation of Brake Pressures

Mail Stop Appeal Briefs & Patents  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

**TRANSMITTAL OF APPEAL BRIEF  
 (PATENT APPLICATION—37 C.F.R. § 1.192)**

**NOTE:** The phrase "the date on which" an "appeal was taken" in 35 U.S.C. 154(b)(1)(A)(ii) (which provides an adjustment of patent term if there is a delay on the part of the Office to respond within 4 months after an "appeal was taken") means the date on which an appeal brief under § 1.192 (and not a notice of appeal) was filed. Compliance with § 1.192 requires that: 1. the appeal brief fee (§ 1.17(c)) be paid (§ 1.192(a)); and 2. the appeal brief complies with § 1.192(c)(1) through (c)(9). See Notice of September 18, 2000, 65 Fed. Reg. 56366, 56385-56387 (Comment 38).

1. Transmitted herewith, in triplicate, is the APPEAL BRIEF in this application, with respect to the Notice of Appeal filed on 6/29/04.

**NOTE:** "Appellant must, within two months from the date of the notice of appeal under § 1.191 or within the time allowed for reply to the action from which the appeal was taken, if such time is later, file a brief in triplicate. . . " 37 C.F.R. § 1.192(a) (emphasis added).

**CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10\***

(When using Express Mail, the Express Mail label number is mandatory;  
 Express Mail certification is optional.)

I hereby certify that, on the date shown below, this correspondence is being:

**MAILING**

deposited with the United States Postal Service in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

37 C.F.R. § 1.8(a)

with sufficient postage as first class mail.  as "Express Mail Post Office to Addressee"  
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**TRANSMISSION**

facsimile transmitted to the Patent and Trademark Office, (703) \_\_\_\_\_

Joyce Krumpe  
 Signature

Joyce Krumpe

(type or print name of person certifying)

Date: 8/30/04

\* Only the date of filing (§ 1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under § 1.8 continues to be taken into account in determining timeliness. See § 1.703(f). Consider "Express Mail Post Office to Addressee" (§ 1.10) or facsimile transmission (§ 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.

## 2. STATUS OF APPLICANT

This application is on behalf of

other than a small entity.  
 a small entity.

A statement:

is attached.  
 was already filed.

## 3. FEE FOR FILING APPEAL BRIEF

Pursuant to 37 C.F.R. § 1.17(c), the fee for filing the Appeal Brief is:

small entity \$165.00  
 other than a small entity \$330.00

Appeal Brief fee due \$ 330.00

## 4. EXTENSION OF TERM

NOTE: 37 C.F.R. § 1.704(b) "...an applicant shall be deemed to have failed to engage in reasonable efforts to conclude processing or examination of an application for the cumulative total of any periods of time in excess of three months that are taken to reply to any notice or action by the Office making any rejection, objection, argument, or other request, measuring such three-month period from the date the notice or action was mailed or given to the applicant, in which case the period of adjustment set forth in § 1.703 shall be reduced by the number of days, if any, beginning on the day after the date that is three months after the date of mailing or transmission of the Office communication notifying the applicant of the rejection, objection, argument, or other request and ending on the date the reply was filed. The period, or shortened statutory period, for reply that is set in the Office action or notice has no effect on the three-month period set forth in this paragraph."

NOTE: The time periods set forth in 37 C.F.R. § 1.192(a) are subject to the provision of § 1.136 for patent applications. 37 C.F.R. § 1.191(d). See also Notice of November 5, 1985 (1060 O.G. 27).

NOTE: As the two-month period set in § 1.192(a) for filing an appeal brief is not subject to the six-month maximum period specified in 35 U.S.C. § 133, the period for filing an appeal brief may be extended up to seven months. 62 Fed. Reg. 53,131, at 53,156; 1203 O.G. 63, at 84 (Oct. 10, 1997).

The proceedings herein are for a patent application and the provisions of 37 C.F.R. § 1.136 apply.

(complete (a) or (b), as applicable)

(a)  Applicant petitions for an extension of time under 37 C.F.R. § 1.136  
(fees: 37 C.F.R. § 1.17(a)(1)-(5)) for the total number of months checked below:

Extension (months)	Fee for other than small entity	Fee for small entity
<input type="checkbox"/> one month	\$ 110.00	\$ 55.00
<input type="checkbox"/> two months	\$ 420.00	\$ 210.00
<input type="checkbox"/> three months	\$ 950.00	\$ 475.00
<input type="checkbox"/> four months	\$ 1,480.00	\$ 740.00
<input type="checkbox"/> five months	\$ 2,010.00	\$ 1,005.00

Fee: \$ \_\_\_\_\_

If an additional extension of time is required, please consider this a petition therefor.

(check and complete the next item, if applicable)

An extension for \_\_\_\_\_ months has already been secured, and the fee paid therefor of \$ \_\_\_\_\_ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$ \_\_\_\_\_

or

(b)  Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

#### 5. TOTAL FEE DUE

The total fee due is:

Appeal brief fee \$ 330.00

Extension fee (if any) \$ \_\_\_\_\_

**TOTAL FEE DUE \$ 330.00**

#### 6. FEE PAYMENT

Attached is a  check  money order in the amount of \$ \_\_\_\_\_  
 Authorization is hereby made to charge the amount of \$ 330.00  
 to Deposit Account No. 50-3145  
 to Credit card as shown on the attached credit card information authorization form PTO-2038.

**WARNING:** Credit card information should not be included on this form as it may become public.

Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.

A duplicate of this paper is attached.

#### 7. FEE DEFICIENCY

**NOTE:** If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to change the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, 1065 O.G. 31-33.

If any additional extension and/or fee is required,

AND/OR

If any additional fee for claims is required, charge:  
 Deposit Account No. 50-3145  
 Credit card as shown on the attached credit card information authorization form PTO-2038.

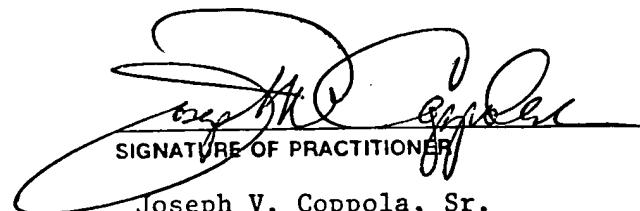
**WARNING:** Credit card information should not be included on this form as it may become public.

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Reg. No.: 33373

Customer No.: 44200

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SIGNATURE OF PRACTITIONER

Joseph V. Coppola, Sr.

*(type or print name of practitioner)*

Honigman Miller Schwartz and Cohn LLP  
32270 Telegraph Road, Suite 225

P.O. Address

Bingham Farms, MI 48025

(Transmittal of Appeal Brief [9-6.1]—page 4 of 4)

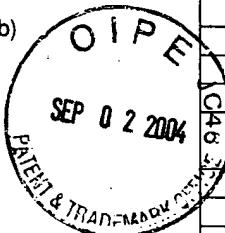
Serial No. 10/181136 Filed: 4/25/02 Attorney: JVC  
Applicant: Latacnik Docket No.: AP9627 Date Mailed: 8/30/04  
Title: Method for Pressure Modulation  First Class Mail  Express

The following was/were received in the U.S. Patent & Trademark Office Mail Room on the date stamped hereon:

Filing Form for Application\*  
(in duplicate if charging deposit account).  
 Originating in the U.S.  
 National Phase under Chapter I  
 National Phase under Chapter II  
  
 Filing Form for Application\*  
(in duplicate if charging deposit account).  
 Provisional Application under 37 CFR 1.53 (c)  
 Regular Application under 37 CFR 1.53 (b)  
 Continuation Application under 37 CFR 1.53 (b)  
 Divisional Application under 37 CFR 1.53 (b)  
 Cont. In Part Application under 37 CFR 1.53 (b)  
 Design  
 RCE  
 Other \_\_\_\_\_

\*Patent Application including:  
 Pages Specification  
 Pages Claims (Claims 1 through \_\_\_\_\_)  
 Pages Abstract  
 Sheets of Drawings (Fig. 1 through \_\_\_\_\_)  
Declaration/Power of Attorney ( \_\_\_\_\_ pages)  
Verified Stmt-Small Entity Status  
Executed Power of Attorney  
 Priority Document(s) No. \_\_\_\_\_ & cover sheet  
 Assignment(s) & cover sheet  
Request to Approve Drawing Change.  
with \_\_\_\_\_ Sheets of Red-Line Drawings  
 Sheets Formal Drawgs w/Cover Sheet(Fig. 1 through \_\_\_\_\_)  
Request for Refund

64098-0888  
209565-81334



Request for Corrected Filing F  
Completion of Filing Requir  
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Petition for \_\_\_\_\_ Mo. Extent  
(in duplicate if charging depo  
Amendment (Response)  
Preliminary Amendment (Re  
Response to Election Restri  
Information Disclosure Stat  
Form(s) PTO-1449 ( \_\_\_\_\_  
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Application Data Sheet  
Notice of Appeal  
Petition \_\_\_\_\_  
Status Inquiry  
Issue Fee Transmittal  
Appeal Brief (triplicate)  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/181,136	07/12/2002	Ivica Batistic	AP9781	5604

44200 7590 12/01/2004

HONIGMAN MILLER SCHWARTZ AND COHN LLP  
32270 TELEGRAPH RD  
SUITE 225  
BINGHAM FARMS, MI 48025-2457

EXAMINER	
SICONOLFI, ROBERT	
ART UNIT	PAPER NUMBER
3683	

DATE MAILED: 12/01/2004 *ar*

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/181,136	BATISTIC ET AL.
	Examiner	Art Unit
	Robert A. Siconolfi	3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 02 September 2004.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 12,15 and 17-22 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 12,15 and 17-22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

**DETAILED ACTION**

1. Appeal brief filed on 7/30/04 has been received. Appeal brief filed on 9/2/04 has been received.
2. Applicants have submitted two appeal briefs with conflicting sets of claims and arguments. The Appeal Brief filed on 7/30/04 appears to belong to the instant application. The Appeal Brief filed 9/2/04 lists examiner Mariano Sy as the examiner but has the serial number of the instant application.
3. Additionally, the Appeal brief of 7/30/04 has made statements based on typographical errors in the Final rejection. In order to clear up any confusion in the prosecution history, the examiner is issuing a new final rejection as follows. Applicant is welcome to file arguments in an after final response or in a new Appeal Brief.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Art Unit: 3683

5. Claims 12,15,17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano in view of Lindemann (U. S. Patent no. 4,349,876).

Sano discloses:

See figure 47 Curve inner wheel FWL, Curve outer wheel RWR, increasing brake force at curve outer wheels  $+\Delta F_x$ , decreasing brake force at curve inner wheels  $-\Delta F_x$ ,

Sano does not disclose delaying the pressure increase of the curve outer wheel compared to the pressure decrease of the curve inner wheel. Lindemann teaches delaying the pressure changes across a vehicle in order to ensure stability (see pressure pulses  $T_s$  and  $T_v$  for wheels). It would have been obvious to one of ordinary skill in the art at the time the invention was made to delay the pressure increase of the outer wheel compared to the pressure decrease of the inner wheel in order to maintain stability.

Regarding claim 19, the brake distribution (brake allocation control) is calculated in the ECU and such values are adjusted as shown in Figure 47.

Regarding claim 21, all brake systems determine an “optimized” for the current situation based on the information available to the system.

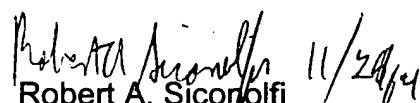
6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Siconolfi whose telephone number is 703-305-0580. The examiner can normally be reached on M-F 10 am-3 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on (703) 308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Robert A. Siconolfi 11/20/04  
Examiner  
Art Unit 3683

RS



UNITED STATES  
PATENT AND  
TRADEMARK OFFICE

MONTHLY STATEMENT  
OF DEPOSIT ACCOUNT

To replenish your deposit account, detach and return top portion with your check. Make check payable to Director of Patents & Trademarks.

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LAURA THOMAS  
2290 FIRST NATIONAL BLDG.

DETROIT MI 48226

AP9627

10/018,269

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MO.	DAY	YR.	CONTROL NO.				
9	1	04	3	E-REPLENISHMENT	9203	-5731.00	24016.00
9	1	04	25	09321029	8007	20.00	23996.00
9	2	04	17	10181133	AP9777	1501	1330.00
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9	2	04	19	10181133	AP9777	8001	9.00
9	2	04	112	10477856	AP10127	1617	130.00
9	2	04	113	10477856	AP10127	8021	40.00
9	2	04	114	10477856	AP10127	1253	950.00
9	2	04	124	10181136	AP9781	1402	330.00
9	2	04	1049	78477685	51597-84556	7001	1005.00
9	3	04	595	76343117	209390-82216	7004	150.00
9	3	04	653	76343921		65601-0067	150.00
9	3	04	673	76385708	209390-82212	7004	150.00
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9	8	04	12	10275406		AP9869	110.00
9	8	04	13	10416386		AP9990	110.00
9	8	04	63	60591193	209529-82921	8021	40.00
9	8	04	64	6109344	EP00965423.7	8021	240.00
9	8	04	123	10024113		AP9982	1501
9	8	04	124	10024113		AP9982	1504
9	8	04	125	10024113		AP9982	8001
9	8	04	191	10240118		A9836	1501
9	8	04	192	10240118		A9836	1504
9	8	04	193	10240118		A9836	8001
9	9	04	5	10381561		AP9951	1251
9	9	04	32	10935143	209540-84343	2001	385.00
9	9	04	33	10935143	209540-84343	2202	18.00
9	9	04	43	10935496	209593-81848	1001	770.00
9	9	04	44	10935496	209593-81848	1202	180.00
9	9	04	45	10935496	209593-81848	1201	86.00
9	9	04	94	6272025		68616-76665	8021
9	10	04	88	10936370	209593-82338	1001	240.00
9	10	04	89	10936370	209593-82338	1202	770.00
9	10	04	51	09876498		64603-0249	1252
9	13	04	99	10937679	207818-84189	2001	420.00
							385.00
AN AMOUNT SUFFICIENT TO COVER ALL SERVICES REQUESTED MUST ALWAYS BE ON DEPOSIT				OPENING BALANCE	TOTAL CHARGES	TOTAL CREDITS	CLOSING BALANCE

\*\*\* O.D. INDICATES OVERDRAWN